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ABSTRACT

The report of the Research Coordinating Unit for Vocational Education located in the State Department of Education describes activities relating to the following objectives: (1) locating and disseminating research findings, (2) sponsoring in-service training on research methods and design, (3) acting as a liaison between agencies and organizations interested in research, (4) promoting consultation services for institutions and organizations planning and conducting research, (5) coordinating research, and (6) stimulating research. (JK)

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FINAL REPORT

Project No. 7-0805
Contract No. OEG 0-8-070805-0389

A CONTINUATION OF SUPPORT FOR THE COORDINATING UNIT FOR OCCUPATIONAL RESEARCH IN THE CALIFORNIA STATE DEPARTMENT OF EDUCATION

Reporting Period:

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Robert F. Barnes

September 1969

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Vocational Education Section
California State Department of Education

Sacramento, California

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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SUMMARY

The California Research Coordinating Unit for Vocational Education is located in the State Department of Education. The Unit began operation June 1, 1966 as a result of the Vocational Education Act of 1963, and completed 2 years and 7 months of operation on December 31, 1968. This report covers the 26 months' period from July 1, 1967 through August 31, 1969.

The report describes the Unit's activities pertaining to the following objectives:

A. Locate and disseminate research findings related to vocational education.

B. Sponsor in-service training in research methods and design for persons interested in research related to vocational education.

C. Act as liaison between agencies and organizations interested in research in vocational education.

D. Provide consultative services for institutions and organizations planning and conducting research in vocational education.

E. Coordination of research in vocational education.

F. Stimulation of research in vocational education.

Also included in the report are current problems, conclusions and recommendations.

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INTRODUCTION

The California Research Coordinating Unit for Vocational Education was created as a result of the Vocational Education Act of 1963. This Final Report carries the activities of the Unit's second funding period. Under the original project, the Unit began operation June 1, 1966. The grant period being reported began July 1, 1967 and ended August 31, 1969, or a total of two years and two months of operation.

Recognizing that research activities designed to facilitate the teaching-learning process were necessary for the improvement of vocational education, legislators provided authorization for ten percent of funds of the Vocational Education Act of 1963, to be used for research. With this research thrust, Coordinating Units were authorized for the purpose of coordination, stimulation, and dissemination of research related to vocational education.

Within the California State Department of Education, the Research Coordinating Unit is the only unit with coordinating functions for research pertaining to a single aspect of the curriculum, which in this case is vocational education. The Unit identifies research dealing with, or relating to, occupational education and draws it together for the purpose of making findings available and usable in recommending program changes. In addition, this activity identifies needed research for the establishment of priorities and direction of research stimulation activities.

This report describes the Unit's success in accomplishing the goals briefly alluded to in this introduction.

METHOD

The California Research Coordinating Unit continues to be located in the State Department of Education. During the 26 months' period being reported, the Unit has been under the direct administrative responsibility of the State Director of Vocational Education, and the Coordinator has been a member of the administrative staff of the Vocational Education Section. Throughout recent months, the State Department of Education has been undergoing study for reorganization. Reorganization considerations include the continuance of the Research Coordinating Unit in the State Department of Education.

During the first year of the 26 months' funding period being reported, the Unit staff consisted of a Coordinator, two Research and Evaluation Consultants, two Intermediate Stenographers, one half-time Clerk, and a small amount of part-time professional help. During the next ten and one-half months of the period being reported, the position of Coordinator was vacant. The primary mode of operation provided for the Coordinator to spend the major portion of his time on coordination activities, while the two Consultants were engaged in activities of the Information Center, storing, retrieving, and disseminating research information, as well as consulting with persons engaged in research activities. Therefore, this vacancy necessitated adjustment of duties, and influenced services offered by the Unit. Unit personnel worked with persons in colleges and universities, local school districts, and private research organizations, as well as other State agencies, and persons in the State Department of Education. Research funds have been sought for specific projects; assistance provided in research design both for proposal writing and in conducting research; stimulation and encouragement have been provided; and the Unit has conducted workshops to upgrade vocational educators and others interested in research design.

During the first 22 months of the reporting period, the Research Coordinating Unit Advisory Committee was used only on the basis of consulting with individual members. In April, the committee was reorganized and reactivated. Since that time it has met twice and is serving as a "sounding board" for the staff of the R.C.U. in matters such as establishing priorities for the California vocational research program, improving information dissemination practices, helping the staff indentify those priorities which can be reached on the basis of existing funding, etc. The coordinator and his staff have found this group to be most helpful and cooperative and it is hoped that future efforts will make this unit an even more viable and valuable unit to the Vocational Section.

RESULTS

This section describes the Unit's activities over the past 26 months in responding to the objectives or purposes of the Unit. The section will be broken into sub parts pertaining to each major objective of the Unit.

A. Objective: To locate and disseminate research findings related to vocational education.

The Unit has accepted this as an important objective because of the need for complete and up-to-date information in order to efficiently and effectively act upon other objectives of the Unit.

In accomplishing its task of identifying vocational education research and research-related documents and on-going activities, the Unit utilizes the services of the Educational Resources Information Center (ERIC) and its Clearinghouses, ERIC Document Reproduction Service (EDRS), and the Clearinghouse for Federal, Scientific and Technical Information (CFSTI), as well as state and local school offices and other miscellaneous agencies and services.

Many publications are routinely reviewed to locate vocational education materials. Among these publications are the following:

1. Grant Data Quarterly
2. Foundation News
3. Newsletters of the ERIC Clearinghouses
4. Monthly Catalog--United States Government Publications
5. Abstracts of Research and Related Materials in Vocational and Technical Education (ARM)
6. Abstracts of Instructional Materials in Vocational and Technical Education (AIM)
7. Research in Education (RIE), monthly and historical volumes
8. ERIC Manpower Research Inventory Volume
9. Pacesetters in Innovation
10. Other miscellaneous vocational education periodicals and publications

The Unit actively solicits local documents from county and district education offices.

Files, with a retrieval system, have been established for the storage and retrieval of documents. At present, the Unit has approximately 5,500 documents on microfiche and 1,500 hard copy documents.

The Unit prepared several papers and summaries, or abstracts, of the works of others for distribution. Among the items prepared were:

Papers:

"Needs Assessment, a Process in Vocational Education" by Robert J. Darling.

"Small Sampling Techniques" by Robert J. Darling.

Abstracts:

"An Analysis of the Comparative Costs and Benefits of Vocational Versus Academic Education in Secondary Schools" by Jacob J. Kaufman.

"The Role of the Secondary Schools in the Preparation of Youth for Employment" by Jacob J. Kaufman.

"The Process and Product of T & I High School Level Vocational Education in the United States" by American Institutes for Research.

"Dominant Factors Influencing the Employment Success of a Selected Group of Disadvantaged Youth" by Jack Michie, East Bay Skills Center.

"Vocational Education -- A Study of Benefits and Costs" by A.J. Corazzini.

"The Emerging Role of the State Director of Vocational Education" by W.P. Smith.

Bibliographies:

The Unit prepared bibliographies of all materials stored in the R.C.U. Information Center pertaining to agricultural education and business education, and distributed these at the Agricultural and Business Statewide Educational Conferences during the first part of this reporting period. The bibliography

for agricultural education was revised, updated and distributed at the 1969 Agricultural Education State Conference. During the last two months of the reporting period, work has been started on developing similar bibliographies in Allied Health Occupations, Work Experience Education, Distributive Education, and Trade and Industrial Education.

Research Summaries:

Four research summaries underway prior to the report period were completed and disseminated. The summaries were:

"Evaluation in Vocational Education"
"Vocational Agriculture"
"Home Economics Education"
"Business Education"

Video Tape:

"The California Research Coordinating Unit," a video tape describing the purpose and function of the Unit, was prepared and made available to private and public institutions.

An Analysis:

The Interim Report of the Statewide Evaluation of the Vocational Education Study being conducted in California by Arthur D. Little, Inc. was analyzed, and a report prepared for the State Vocational Education staff.

At the beginning of this reporting period, the Unit was publishing and distributing a quarterly newsletter. Due to the questionable value of this publication in terms of effort expended and cost, the newsletter was discontinued. When the new Coordinator was employed, the staff decided to submit monthly releases to the State Vocational Education Newsletter. This publication is published monthly from September through June and is an established publication among vocational educators in the State as well as having a wide circulation.

An additional method of dissemination was effected by means of talks to various education, industry and ethnic groups, and by individual contacts with persons interested in conducting or interpreting research.

B. Objective: Sponsor inservice training in research methods and design for persons interested in research related to vocational education.

The Unit sponsored a four-day evaluation workshop. Personnel from the Research and Development Center at the University of California at Los Angeles assisted in the presentations at the workshop. Thirty local directors of vocational education, and five persons from the California State Department of Education were conference participants.

A Data Collection Workshop, with emphasis on follow-up studies for evaluation purposes, was conducted by the Unit. This was a three-day workshop, and 78 leaders in vocational education attended.

Also during this reporting period, funding was obtained from the Director to finance three regional workshops on Systems Evaluation for local and county Coordinators and Directors of Vocational Education. On the basis of competitive bids, the contract to conduct these workshops was let to Serendipity, Inc. The workshops will be conducted during the early part of the school year. One of the primary objectives of these workshops is to begin the establishment of a corps of local personnel to train other local staff members in the theory and procedures of systems evaluation of the total local vocational education programs on an ongoing and continual basis. It is anticipated that two more such series of these workshops will be held during the coming year.

In-service training also existed on an individual or small group basis during the many contacts of the consultants while exploring research possibilities and developing research proposals.

C. Objective: Act as liaison between agencies and organizations interested in research in vocational education.

Unit personnel have worked with numerous public and private educational and research organizations to bring together the interests, capabilities and purposes of the organizations to bear upon research problems. Some of the organizations that the Unit assisted in making contact with other agencies for research activity were:

American Institutes for Research

The Center for Technological Education
San Francisco State College

InfoSci, Inc.

Various State of California departments and agencies

Serendipity, Inc.

Insgroup, Inc.

Hypermetrics, Inc.

U.R.S. Systems, Inc.

ESEA Title III Supplementary Centers

Various local education agencies

Various Colleges and Universities

Management & Economics Research, Inc.

General Systems Industries, Inc.

Spanish Speaking Research and Development Associates

Alan Young Associates, Engineering Research

California Association of Secondary School Administrators

Accrediting Commision for Secondary Schools

D. Objective: To provide consultative services for institutions and organizations planning and conducting research in vocational education.

The following institutions, organizations and individuals were contacted during the period being reported in an effort to carry out this objective:

1. California State Department of Education, Vocational Education Coastal Regional Office: Assisted in the initial development of a research survey proposal to study off-farm job opportunities in a metropolitan area.

2. Compton High School: Integration of academic courses in vocational education programs.

3. Fresno State College: Discussed the potential of a research project related to use of paraprofessions in education.

4. Grossmont High School District: Consulted with Virginia Clapp at Grossmont pertaining to a follow-up study and a business machine needs study.

5. Los Angeles Trade-Technical College and Los Angeles Valley College: Reviewed research proposal and suggested ways to strengthen specification of objectives and means of evaluation (Exploratory Study in Methods of Making Occupational Curricula Available to More Students, with Special Emphasis on Minority Groups).

6. Modesto Junior College: Contacted personnel in reference to project in agricultural mathematics and technical writing. Explored the possibility of a research project to evaluate the value of materials developed in the ag-math project.

7. San Diego County Office of Education: Developing techniques for more adequate follow-up of vocational education students.

8. San Francisco City Schools: Consulted with personnel concerning a project to teach mathematics in vocational courses.

9. San Francisco State College: Discussed the development of a vocational work experience and educational center for Negroes.

10. San Francisco State College: Potential research program for disadvantaged youth.

11. San Jose State College: Assisted in the delineation of a vocational counselor education program for demonstration purposes.

12. San Jose Unified School District: Suggested outline of a method proposal designed to test the effectiveness of a computerized technique to select students and predict class success in an area vocational school.

13. Solano County Office of Education: Pilot project on occupational guidance trailer.

14. Sonoma County Office of Education: Occupational guidance films produced under a V.E.A. project.

15. Spanish Speaking Research & Development Associates: To determine the effectiveness of teaching vocational skills to Mexican-Americans, using a bi-lingual approach.

16. Stanislaus County Office of Superintendent of Schools: Reviewed and suggested evaluation procedures for vocational guidance technique called V I E W (Vocational Information for Education and Work).

17. Tamalpias High School: Consulted with Business Education personnel about the possibilities of a project to evaluate the steno-type machine.

18. Vacaville Unified School District: Continued assistance on the vocational agriculture feedback project.

19. Systems Development Corporation: A Proposal to Evaluate the Effectiveness of Research Coordinating Units for Vocational Education in the Various States.

20. Spanish Speaking Research and Development Association: Training for Spanish Speaking Adults.

21. Marin County: Title III Proposal for Innovative Program in Vocational Education.

22. San Jose Unified School District: A Multipurpose Approach to Vocational Guidance. A four-district project to develop and evaluate a multivariate model, emphasizing student vocational training choices.

23. Alameda County and State Department of Education: A Survey of Metropolitan Off-Farm Agricultural Job Opportunities and Related Competencies.

24. California Manpower Development and Training Act Unit: A Study of Factors Impeding the Initiation and Progress of MDTA Programs.

25. Marin Junior College: Discussion and review of the survey of Negro success, attitudes and vocational education needs as related to courses, guidance and recruitment, discussion of data analysis method and data processing services.

26. Placer High School District: Reviewed the current status and recommended a program of data analysis of a countywide survey of vocational education.

27. Grossmont College: A proposal to survey student entry vocational awareness and persistence in vocational education courses.

28. San Jose State College: A counselor training program as supplementary action to the development of a recruitment methodology devised for area vocational schools.

29. Contra Costa County: Countywide survey of occupational education needs.

30. Fresno Regional Center Title III - E.D.I.C.T. (Educational Development for Innovative and Creative Teaching). Examined sample frame and questions related to vocational education as devised for a county educational needs survey. Recommendations were given for changes and analysis of data.

31. Contra Costa County: Occupational Needs Survey.

32. Butte County: Occupational Needs Survey.

33. Tulare County: Occupational Needs Survey.

34. Tamalpais High School: Evaluation of the Use of Stenotype Machines in Stenography Programs.

35. Sacramento State College: Evaluation of Pre-testing Program for Engineering Students.

36. Grossmont Unified School District: Follow-up of Graduates of Vocational Education Programs.

37. University of Southern California: Summer Institute for Occupational Analysis.

38. Los Angeles County Office of Education: Summer Institute Related to Vocational Education in the Large Cities.

39. Institute for the Study of Crime and Delinquency: A Summer Institute for Vocational Education and Correctional Institutions.

40. Santa Clara County Medical Society: New and Innovative Allied Health Occupational Education Program. This project consisted of consortium with Stanford Medical School, Foothill College, San Jose City College, West Valley College and related medical organizations in the Santa Clara County area.

41. Loma Linda University: Allied Medical Health Curriculum.

42. Mt. San Jacinto College: A Study of the Effectiveness of Using Behavioral Objectives and Multi-Media Instruction for College Intermediate Typewriting.

43. University of California at Los Angeles: New Programs in the Allied Health Fields. This project involved a consortium of the University of California, Los Angeles, Medical School; University of California, Los Angeles, Division of Vocational Education; and Junior Colleges in the Los Angeles City School System.

44. Center for Technological Education - San Francisco State College: Preparing a proposal for the evaluation of the FEAST (Food Education and Services Training) program.

45. San Jose Unified School District: Development, Implementation and Evaluation of Computerized Guidance in the Selection of Training and Placement.

46. American Institute for Research: Motivation in the Preparation of Students for Vocational Education.

47. Santa Cruz County Office of Education: Industrially Oriented Communications Study.

48. Grossmont College: A proposal to evaluate the entrance, motivation, progress and sequential development of junior college students in the college environment.

49. Placer County: An analysis of data derived from a survey of local vocational education needs and services.

50. Hughson High School: Preparing a Proposal for Program to Develop Learning Activity Packages (LAPS) in Vocational Education.

51. Compton High School District: A task force to develop educational specifications and facilities for a total community approach to vocational education.

52. Yolo County Office of Education: The preparation of a Survey Designed to Determine the Vocational Education Needs in Yolo County.

53. College Park High School: Assisted in the Design of a Project Pertaining to Articulation, Team Planning and Team Teaching in Business Education.

54. Diablo Valley College: Discussed Project Possibilities for Articulation Program to Teach Mexican-Americans in Their Homes.

55. San Mateo High School District: Developing a proposal designed to use color coding for key identification in typewriting. Stimulate interest in the development of a proposal to Determine the Value of Several Occupational Guidance Tools, VIEW, Film Loop, Community Resource Center.

56. Del Norte County Unified School District: Determine the Possibilities of a Project for the Development of a Curriculum for a Library Aid Program.

57. Visalia Unified School District: Designing a proposal for a Study to Determine the Needs of Home Economics Education.

58. Valley Oaks Union High School: Development of a Model Curriculum for Teaching about Occupations at the Eighth Grade Level.

59. College of Notre Dame in Belmont: A Summer Institute on Program Planning, Budgeting and Evaluation in Vocational Education.

60. Mt. San Antonio Junior College: Development of a Program for Vocational Guidance Activities at the Junior College Level.

61. Citrus College: Assisted in the preparation of a proposal designed to determine how appropriate the Junior College Drafting Curriculum is in meeting the needs of industry.

62. Office of County Superintendent of Schools, Yolo County: Survey to provide baseline data for planning cooperative vocational education programs for the high schools of Yolo County.

63. Office of County Superintendent of Schools, Santa Cruz County: Industrially Oriented Communications Skills Study.

64. San Bernardino Valley Joint Junior College: Project M & M - Marketing and Merchandising.

65. Hughson High School: The Establishment of a Joint Demonstration Project Featuring a Completely Articulated Vocational Education Curriculum 8 through 14, which Provides for Individualized Instruction and Continuous Progress through the Utilization of (LAPs), Learning Activity Packages.

66. Mt. San Jacinto College: Development of a proposal: A Study of the Effectiveness of Using Behavioral Objectives and Multi-Media Instruction for College Intermediate Typewriting.

67. Mt. San Jacinto College: A Study of the Effectiveness of Utilizing Individualized Filmstrips, Tapes and Coordinated Worksheets as Instructional Tools for Beginning College Mathematics Classes.

68. Mt. San Jacinto College: A Study of the Effectiveness of History Instruction; Utilizing Radio Broadcasting Combined with a Visually Illustrated Syllabus with Check-up Questions when Compared with Individualized Instructions Utilizing Filmstrip, Audio Tape and Work Sheet.

69. Compton Union High School: Vitalization of Basic Science Support of Vocational Education.

70. Peace Officers' Training, Bureau of Junior College Vocational-Technical Education: Revision of Law Enforcement Science Curriculum.

71. De Anza College, Law Enforcement Education: Study of the Feasibility of the Auto-Tutorial Teaching System Within the Social Science Division.

72. Sonoma County Superintendent of Schools Office, Vocational Guidance: Literature search for methods design in vocational follow-up of graduates.

73. Sequoia Union High School, Vocational Education: Reviewed for funding approval, Proposal for Low Achieving Students Entering Business Education.

74. Alameda County PACE Center: Evaluated the vocational adaptation of the industrial fault-tree analysis technique.

75. Ralph F. Celmer, Technical Consultant: Evaluation of the Vocational Articulated Curriculum of the Hughson High School District.

76. Southern Counties Gas Company: Developing a project: Determining the Transferability of Psycho-motor Skills in Operating Types of Equipment Used in Home Economics Laboratories.

77. Compton Union High School: Providing advisory assistance on 4(c) project: Development of a Basic Science Curriculum Designed to Prepare Disadvantaged Persons of the Compton High School Area for Employment in Allied Health Occupations.

78. Solano County Junior College: Development of a Proposal for a Criminal Justice Training Center.

79. Napa Junior College: Development of a Proposal for a Multi-County Closed Circuit Educational Television Project.

80. Bureau of Industrial Education, California State Department of Education: Advisory and funding assistance on a project to evaluate a special summer training program in five urban disadvantaged areas.

81. De Anza College: Exploring proposal possibilities for a curriculum study in Health Services, with emphasis on "New Careers."

82. San Jose Unified Schools: Development of a proposal: Development, Implementation and Evaluation of Selected Elements of a Guidance System for Regional Vocational Centers.

83. Project FEAST (Food Education and Training Service): Exploring funding and proposal possibilities for an evaluation of Project FEAST.

84. De Anza College: Preparation of VEA proposal: Pistol Range Closed Circuit TV.

85. California State College at Hayward: Preparation of proposal: High School Graduates' Perception of Needed Vocational Skills.

86. Bureau of Junior College, Vocational-Technical Education, California State Department of Education: Preparation of a program overview and related research in public service curriculum and new careers.

87. Vocational Education Section, California State Department of Education: A literature search was provided and a project initiated in Business Education.

88. Sacramento County Schools: A literature search and listing of pre-program assessment of progress, and terminus evaluation of five aviation mechanics courses.

89. Nevada Research Coordinating Unit: Consultation on the establishment of a Vocational Education Information Center in Nevada.

90. Los Angeles City Schools: A Proposed Student Follow-up System.

91. Western Association of Schools and Colleges: Vocational Education Program Evaluation for Accreditation.

92. California Association of Secondary School Administrators: Evaluating Vocational Education.

93. Oakland City Schools: The Use of Data Obtained from Student Follow-up.

94. American Institutes for Research: Development, Implementation, and Evaluation of Selected Elements of a Guidance System for Regional Vocational Centers.

95. Tamalpais High School: Guidance and research project for secondary schools, "Developmental Pilot Project in Modular Career Guidance."

96. California State College at Hayward: Consultation in development of a research project, "The Development of Predictive Criteria for Job Success in Post High School Employment."

97. San Francisco City College: Consulted with Project FEAST staff and U.R.S. Systems Corp. in developing and obtaining funding for an evaluation of Project FEAST.

98. State Center Junior College District: Consulted with staff and funded a study to be used in making recommendations for the development of a regional plan for a vocational educational program in Madera County.

99. Yolo High School: Consulted with staff and provided research reports for the development of a multi-media program to be used in establishing a vocational guidance program for continuation students.

100. Los Angeles Unified School District: Assisted a staff member in developing a proposal for obtaining funding for a project to use television for pre-vocational instruction of English as a second language for Spanish speaking youth and adults.

101. Project PEP: Consulted with staff to explore the possibilities of applying P.E.P. (Preparing Educational Planners) techniques, capabilities and staff in program analysis, evaluation and training programs.

102. Southern California Regional Occupation Center: Reviewed proposal for the development of a guidance information system and made appropriate recommendations.

103. El Camino College: Consulted with staff members to explore the possibilities for funding and conducting a project to prepare teacher aides for pre-school children.

104. Sacramento Unified School District: Helped staff in designing a project to develop a culture-free test of intelligence and in the development of a training program for mentally retarded youth.

105. The Center for Vocational and Technical Education: Prepared and submitted a proposal that was accepted by The Center to cooperate in a pilot effort to develop a model state vocational-technical information dissemination center.

106. Department of Labor: Met with staff to determine possibilities for increased cooperation in identifying existing and projected labor markets, assistance in follow-up studies, etc.

107. California Education Information System: Attended staff meetings to explore possibilities for expanding data processing capabilities in order to incorporate collection of data necessary for federal reports and evaluation of vocational education programs.

108. Stanislaus State College: Participated in a seminar for local school personnel interested in research and development in vocational counseling and guidance.

109. The Center for Vocational and Technical Education: Met with The Center staff and representatives from R.C.U.'s of states cooperating in the pilot effort to develop model Vocational-Technical information centers to establish priorities, methodology, and procedures to be used in this project.

110. Sacramento State College: Consulted with the administrative staff to explore the possibilities for developing a Center of Vocational and Technical Education.

111. Sacramento City College: Consulted with a staff member to help develop a proposal to determine the need for developing a curriculum to train stationary engineers, and to identify subject matter areas to be included in such a curriculum.

112. State Center College: Consulted with staff on need survey being conducted in Madera County to make needed revisions in methodology and instrumentation.

113. U.R.S. Systems Corp.: Consulted with staff in developing methodology and instruments to be used in evaluating the FEAST Project.

114. State E.P.D.A. Vocational Section, Advisory Group: Consulted with this group preparatory to helping develop a prospectus to be submitted to the U.S. Office of Education for obtaining funds for fiscal year 1971 for statewide professional development activities.

E. Objective: Coordination of research in vocational education.

The previously identified activities constitute the bulk of the coordination efforts of the Unit during this reporting period. However, during the last three months of the reporting period, staff members of the Unit have been actively involved in attempting to establish cooperative working arrangements and information exchange with the R.C.U.'s in neighboring states. With the enactment of the Vocational Education Amendments of 1968, the possibility of research funding at the state level has created an additional problem of duplication of research effort. Because of this, the California R.C.U. staff feels it is imperative to establish the previously mentioned cooperative agreements. Such agreements should facilitate exchange of research information and findings, thereby making it possible for a state to meet some of its research priorities through research conducted in another state.

A prime requisite to effective coordination, of course, is a complete, easily accessible, up-to-date information system. This need prompted the Unit to establish a Vocational Information Center. During the last five months of the reporting period, one staff member was assigned the responsibility of developing mailing lists to implement a Selective Dissemination of Information System (SDI).

Liaison, in-service training and consultation have all helped identify problem areas as well as provide some further opportunities for increasing coordination in research. Although coordination of research efforts in vocational education has shown marked improvement since the establishment of the Unit, it still remains one of the most important tasks facing the Unit's staff members.

Although the Unit is represented at almost all vocational education conferences, training meetings, and other activities throughout the State, far too many vocational educators in California profess to know nothing of the Unit. During the last five months of the reporting period, all staff members concentrated their efforts toward improving the public image of the Unit among vocational educators in the State. This emphasis will also be continued in the immediate future.

F. Objective: Stimulation of research in vocational education.

As with coordination, the stimulation efforts expended by the Unit during most of the reporting period were described in the previously presented activities. The Information Center provided some people with knowledge of research voids and needs. However, the interest in research was still primarily with college and university staff. Far too few local educational educators were expressing an interest in research.

The greatest single stimulus of research in vocational education has been brought about by the passage of the Vocational Education Act of 1968. During the last four months of the reporting period, the staff has been attempting to develop lists of persons expressing interest in vocational education research. The staff is trying to categorize these persons according to the eight research priorities identified by the State Plan.

PROBLEMS

One of the major problems facing the majority of the Research Coordinating Units is that of staff size. This was one of five problems affecting the operation of the California R.C.U. during this reporting period. The Unit was without a Coordinator for ten and one-half months of the report period, which necessitated a realignment of responsibilities of the two consultants. The Unit also has a great need for an Information Specialist, if the information dissemination function is to be maximally effective. As funds become available through Section 131(b), Part C, VEA '68, an addition must be made to the Consultant staff in order to maintain existing functions and to effectively monitor funded research projects. With 60 percent of the school population in Southern California, the additional consultant staff should be housed with the Los Angeles Regional Vocational Education office.

Since the Information Center activities are the "backbone" of all major functions of the Unit, it is imperative that these activities be effective. At present, too few people are availing themselves of this service. In addition, it is becoming apparent that the information, as packaged by ERIC, is not particularly usable by local teachers, administrators and supervisors. The Unit is just beginning a project designed to re-package the ERIC reports.

It is becoming obvious from the nature of information requests received within the past six months of the report period that there is an even greater need, as numbers of new users increase, for training in the usage of the Information Center, as well as for training in research design and methodology. Many information requests have been so broad that it is impossible to fill them without additional information.

The fourth problem area, and the most critical in that it affects the effectiveness of all the Unit's functions, is that of poor public image, and lack of a wide acceptance by all vocational educators as being a valuable tool that they can use to improve their own programs. A great deal of effort must be expended by the total staff to solve this problem, because until it is overcome it will be impossible for the Unit to operate at maximal effectiveness.

The last problem has been the lack of funds for funding small projects at the local level. The availability of discretionary funds during the past year helped, but could not begin to meet the demand. It is hoped that adequate funds will be available through Section 131(b) Part F, VEA '68, to fund those research activities at the local level that are badly needed.

CONCLUSIONS AND RECOMMENDATIONS

1. The Research Coordinating Unit, as a new unit in the Vocational Section, State Department of Education, has slowly been establishing a role of service to the State Department of Education, colleges and universities, and to local vocational education programs. During this period of its existence, the need for establishing an increased awareness of the value of research to vocational education has been quite apparent. This increased awareness must be accompanied by a program of involvement, both for persons conducting vocational education research, and for the users and potential users of research findings.

   It is recommended that an increased effort be made by the Unit staff in offering in-service training for both State and local vocational personnel. If this training is to be effective, it must meet the needs of the trainees; therefore, it is further recommended that all future in-service activities be guided by an advisory group composed of a representative sample of the proposed participants.

2. The California R.C.U. Information Storage and Retrieval System has been established with over 5,500 microfiche and approxim ately 1,500 hard-copy documents indexed and stored for retrieval. Although information requests have increased markedly during the last few months of this report period, it is apparent that the System has not been adequately publicized, or that the System does not or cannot accommodate user needs among vocational educators in the State.

   It is recommended that: (a) in-service training be made available to local vocational educators on an area basis; (b) mailing lists for the SDI (Selective Dissemination Information System) be completed as soon as possible; (c) the ERIC materials be repackaged in a format that will be more useful to users; (d) the Unit continue its efforts with the National Center in developing a pilot program for a model information dissemination center.

3. A need recognized since the establishment of the Unit has been for additional funds to conduct research directed toward the solution of local problem areas in vocational education. Many of these problems are not of adequate regional significance to meet the criteria for national funding, while others require such a low level of funding with a very short lead-time so as to preclude their inclusion in departmental budgets.

It is recommended that VEA 1968, Part C, Section 131(b) funds be used primarily to fund action-oriented, applied research designed to increase the effectiveness of local vocational education programs.

4. The activities of the Unit in surveying the vocational education research priorities of the State, plus the priorities spelled out in the most recent legislation, have provided the necessary data to establish research priorities for the 1969-70 State Plan. Although these priorities have been established, the Unit must continue its efforts in this area to be assured that future priorities to be established are meaningful and valid in terms of the needs of vocational education in California.

CERTIFICATION

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